



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,425	12/20/1999	CHRISTOPH CAPELLARO	P99.2497	2302
21171	7590	02/20/2007	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			PICH, PONNOREAY	
			ART UNIT	PAPER NUMBER
			2135	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/20/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/446,425	CAPELLARO ET AL.	
	Examiner	Art Unit	
	Ponnoreay Pich	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 06 December 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 28-38, 41, 43, 45-49, 52, 54-57, 60 and 63-76 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 28-38, 41, 43, 45-49, 52, 54-57, 60, and 63-76 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 28-38, 41, 43, 45-49, 52, 54-57, 60, and 63-76 are pending. Claims 63-76 were newly added.

The indications of allowable claims in the prior office action are withdrawn in view of the newly discovered reference(s) to Alden et al (US 6,101,543). Rejections based on the newly cited reference(s) follow. Any inconvenience is regretted.

Applicant's amendments and arguments were fully noted, but are moot in view of new rejections made below in light of newly discovered prior art. Any well known art statements made in the prior office action not specifically or adequately traversed are taken as admittance of prior art as per MPEP 2144.03.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 70-72 and 75 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

1. Claims 70-72 are directed towards an apparatus comprising a processor. As evidenced by the attached IEEE dictionary printout, a processor can refer to either hardware or software. Because claims 70-72 can reasonably be interpreted as being directed towards software *per se*, the claims are not statutory.

2. Claim 75 is directed towards a communication system which appears to be composed of elements which one can reasonably interpret as being implemented as software per se, thus is not statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 28-30, 41, 43, 45, 63, 66, 68-70, 73 are rejected under 35 U.S.C. 102(e) as anticipated by Alden et al (US 6,101543).

Claim 28:

Alden discloses:

1. Encoding the digital message by a first application; i.e. TCP/IP stack, WinSock API, or TCP/IP layers; executing on the computer to form an encoded message via employment of an encoding format of a network protocol (col 14, lines 64-67; col 18, lines 17-30 and 58-65; Fig 1; and Fig 19). *The TCP/IP stack is located in*

- the network layer. As evidenced by Figure 1, any message passing through the network layer gets encoded in the encoding format of the TCP/IP network protocol. Since in the cited sections a data packet is sent to the TCP/IP stack and is passed by the TCP/IP stack to the pseudo network adapter, the packet was encoded by the TCP/IP stack.*
2. Subjecting the encoded message, not a decoded message obtained from the encoded message, to at least one cryptographic process in a proxy agent application executing on the computer to form a cryptographic processed message (Fig 19; col 11, lines 31-37; col 18, lines 38-40; and col 19, lines 1-6).
3. Encoding the cryptographically processed message via employment of the encoding format of the network protocol (Fig 19; col 15, lines 2-5; col 17, lines 7-10; col 18, lines 43-46; and col 19, lines 8-11). *After encrypting the data packet, the packet is passed back to the TCP/IP stack, thus is encoded once more via employment of the encoding formation of the TCP/IP stack.*

Figure 19 shows the path data takes in transmission. First, it goes through the TCP/IP layers where it is encoded via the TCP/IP protocol, then it goes to the pseudo adapter (step 382) where it is encrypted. Then, the encrypted packet is passed through the TCP/IP layers once more where it is encoded again via the TCP/IP protocol.

Note that while the encoding in the sections specifically cited by the examiner uses the TCP/IP network protocol, other network protocols are also used for encoding the packet disclosed by Alden. As seen in Figure 1, the OSI model of networking uses

seven protocol stack layers. Each layer adds its own encoding to the packet as it travels through the layers when the packet is sent. Any or all of the network protocols defined by these layers of the OSI model can be considered to disclose the encoding format of the network protocol.

Claim 29:

Alden discloses:

1. Decoding at the computer the encoded, cryptographically processed message according to the encoding format of the network protocol to form a decoded, cryptographically processed message (Fig 1; Fig 20; col 17, line 65-col 18, line 6).
2. Subjecting the decoded, cryptographically processed message to a second cryptographic process inverse relative to at least one first cryptographic process by a proxy agent application executing on the computer, which previously encoded an original digital message, to form an inversely cryptographically processed message (Fig 20 and col 18, lines 6-13).
3. Decoding the inversely cryptographically processed message by another application executing on the computer according of the encoding format of the network protocol used in said decoding of the cryptographically processed message (Fig 20 and col 18, lines 6-13).

Claim 30:

The limitations recited in claim 30 is essentially a combination of what is recited in claims 28 and 29 with the extra limitation of transmitting the encoded, cryptographically processed message from the first computer unit to the second computer unit. Thus, claim 30 is rejected over Alden for much the same reasons given in claims 29 and 30. Note that for the second computer to be able to perform the steps recited in claim 30, the encoded, cryptographically processed message must have been transmitted from the first computer unit to the second computer unit. Further, Alden explicitly discloses the recited transmitting step further recited in claim 30 (col 14, lines 2-5 and Fig 19, steps 390-394).

Claim 41:

Claim 41 is directed towards an apparatus comprising a first computer unit and second computer unit with means for implementing the method of claim 30 and thus is rejected for substantially the same reasons given in claim 30. Note figure 14 of Alden discloses a first computer unit (client 247) and second computer unit (server 253). Figures 15-16 disclose the means by which these computer units performs the method of claim 30.

Claim 43:

Alden further discloses wherein the means for encoding the digital message is further provided as the means for encoding the cryptographically processed message (Fig 19).

TCP/IP layers 372 and 374 do both encodings.

Claim 45:

Alden further discloses wherein the means for decoding the encoded, cryptographically processed message is further provided as the means for decoding the inversely cryptographically processed message (Fig 20).

TCP/IP layers 420 and 422 do both decodings.

Claims 63 and 68:

Claims 63 and 68 recite limitations similar to what is recited in claim 1 and are rejected for the same reasons.

Claims 66 and 69:

The limitations recited in claims 66 and 68 are similar to those found in claim 29 and are rejected for substantially the same reasons. Note that claims 66 and 69 also has the limitation of receiving the encoded, cryptographically processed message from a first computer unit, however, Alden also teaches this limitation (Fig 20, items 410-414).

Claim 70:

Claim 70 is directed towards an apparatus comprising a programmed processor which performs the method of claim 28. It is rejected for similar reasons given in claim 28. Figure 19 of Alden shows the components of the programmed processor being claimed which implements the method of claim 28.

Claim 73:

Claim 73 is directed towards an apparatus comprising a programmed processor which performs the method of claim 29. It is rejected for similar reasons given in claim 29. Figure 20 of Alden shows the components of the programmed processor being

claimed which implements the method of claim 29 as well as an interface (item 414) receiving the encoded, cryptographically processed message from the computer unit.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 31-34, 37-38, 46-49, 52, 54-57, 60, and 75-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden et al (US 6,101543) in view of Fujino et al (US 5,651,006).

Claim 31:

Alden does not explicitly disclose including a request for implementing a prescribable action in the digital message; implementing the prescribable action from the second computer unit to obtain a result of the prescribable action; and sending the result of the prescribable action from the second computer unit to the first computer unit in a reply message. However, these limitations are disclosed by Fujino (col 6, lines 51-67; col 7, lines 1-12; Fig 2; and Fig 3).

In light of this, it would have been obvious to one of ordinary skill in the art to modify Alden's invention according to the limitations further recited in claim 31. One

skilled would have been motivated to incorporate Fujino's teachings because it would allow for managing a large-scale communication network (Fujino: col 2, lines 48-50).

Claim 32:

Alden discloses:

1. Encoding a message according to the encoding format of the network protocol to form an encoded message (col 14, lines 64-67; col 18, lines 17-30 and 58-65; Fig 1; and Fig 19).
2. Subjecting the encoded message to at least one cryptographic process in the second computer unit to form a cryptographically processed message (Fig 19; col 11, lines 31-37; col 18, lines 38-40; and col 19, lines 1-6).
3. Storing the cryptographically processed message (Fig 19).
4. Transmitting a message from the first computer unit to the second computer unit (col 14, lines 2-5 and Fig 19, steps 390-394).
5. Encoding the cryptographically processed message according to the encoding formation of the network protocol to form an encoded, cryptographically processed message (Fig 19; col 15, lines 2-5; col 17, lines 7-10; col 18, lines 43-46; and col 19, lines 8-11).
6. Transmitting the encoded, cryptographically processed message (col 14, lines 2-5 and Fig 19, steps 390-394).
7. Encoding a fetch message, i.e. REQUEST frame, in the first computer unit according to the encoding format of the network protocol, wherein the

cryptographically processed reply message is requested from the second computer with the fetch message (col 19, lines 15-59).

8. Transmitting the fetch message from the first computer unit to the second computer unit (col 19, lines 15-59).
9. Receiving the fetch message by the second computer (col 19, lines 15-59).
10. Transmitting a reply message, i.e. RESPONSE frame, from the second computer unit to the first computer unit (col 19, lines 15-59).

Alden does not explicitly disclose:

1. Including a request for implementing a prescribable action in the second computer unit to obtain a result of the prescribable action.
2. Implementing the prescribable action in the second computer unit to obtain a result of the prescribable action.
3. Forming a reply message which contains the result of the prescribable action in the second computer unit.
4. The encoding and cryptographically processed message being a reply message formed at the second computer unit.

However, limitations 1-4 discussed above as not being explicitly taught by Alden are similar to the limitations discussed in claim 31 as being obvious over Fujino. For similar reasons discussed in claim 31, it would have been obvious to one skilled in the art to incorporate limitations 1-4 within Alden's invention in light of Fujino's teachings

Art Unit: 2135

according to the limitations recited in claim 32. One skilled would have been motivated to incorporate Fujino's teachings for the same reasons discussed in claim 31.

Claim 33:

All the limitations recited in claim 33 can be found in claim 32 also. As such, the same reasons used to reject claim 32 also applies to claim 33.

Claim 34:

As per the limitation further recited in claim 34, it is obvious to Alden's modified invention because Fujino discloses the cryptographically processed reply message is stored in a management information base in the second computer unit (col 3, lines 19-23).

Claim 37:

As per claim 37, Fujino implicitly discloses employing a get request as the fetch message; and forming a get response upon the encoding of the requested, cryptographically processed reply message due to his disclosure of use of SNMP (col 2, lines 49-53). One skilled should appreciate that SNMP uses a get request as a fetch message and a get response as a reply message.

Claim 38:

As per claim 38, Fujino further discloses transmitting as the prescribable action at least one of an information query and an information indication of the second computer unit (col 6, lines 51-67 and col 7, lines 1-12).

Claim 46:

Claim 46 is directed towards means for implementing the method of claim 31 and is rejected for substantially the same reasons given in claim 31.

Claim 47:

Claim 47 is directed towards means for implementing the method of claim 32 and is rejected for substantially the same reasons given in claim 32.

Claim 48:

Claim 48 is directed towards means for implementing the method of claim 33 and is rejected for substantially the same reasons given in claim 33.

Claim 49:

Claim 49 is directed towards means for implementing the method of claim 34 and is rejected for substantially the same reasons given in claim 34.

Claim 52:

Fujino further discloses wherein the network protocol is a simple network management protocol version 1 (col 2, lines 48-52).

Claim 54:

As per claim 54, Fujino discloses use of simple network management protocol version 1 (col 2, lines 48-52). Further, one skilled should appreciate that SNMPv1 defines five core protocol data units (PDUs): GET REQUEST, which is used to retrieve a piece of management information; GETNEXT REQUEST, which is used iteratively to retrieve sequences of management information; GET RESPONSE, which causes used agents to respond with data to GET and SET requests from the manager; SET REQUEST, which is used to initialize and make a change to a value of network

elements; and TRAP, which is used to report an alert or other asynchronous event about the managed system. As such, Fujino also implicitly discloses wherein the means for encoding the cryptographically processed message is configured such that a set request is formed upon the encoding of the cryptographically processed message.

Claim 55:

Claim 55 is directed towards means for implementing the method of claim 37 and is rejected for substantially the same reasons given in claim 37.

Claim 56:

Claim 56 is directed towards means for implementing the method of claim 38 and is rejected for substantially the same reasons given in claim 38.

Claim 57:

Alden further discloses wherein the means for cryptographically processing the encoded message, the means for encoding the cryptographically processed message and the means for sending the encoded cryptographically processed message are formed together as a first proxy agent (Fig 14, items 248 and 250; Fig 16; and Fig 19), and wherein the means for receiving the encoded cryptographically processed message, the means for decoding the encoded cryptographically processed message and the means for inversely cryptographically processing the decoded cryptographically processed message are formed together as a second proxy agent (Fig 14, items 254 and 255; Fig 16; and Fig 20).

Claim 60:

As per claim 60, the apparatus having limitations recited therein is similar to the apparatus recited in claim 41 and these limitations are rejected for the same reasons given in claim 41 over Alden. Alden does not explicitly disclose the communication system having a manager of a communication network and an intermediate manager of a communication network, the communication system employing the communication network and offering further services that proceed beyond services offered by the communication network to customers. However, these limitations are disclosed by Fujino (Fig 2 and col 2, lines 48-59).

At the time applicant's invention was made, it would have been obvious to one of ordinary skill to incorporate the apparatus as recited in claim 41 (disclosed by Alden) within the system disclosed by Fujino. One skilled would have been motivated to combine Alden and Fujino's teachings for the same reasons given in claim 31.

Claim 75:

The limitations found in claim 75 are a combination of limitations found in claims 60 and 70. Thus claim 75 is rejected for similar reasons given in claims 60 and 70.

Claim 76:

The limitations found in claim 76 are a combination of limitations found in claims 60 and 73. Thus claim 76 is rejected for similar reasons given in claims 60 and 73.

Claims 35-36, 64-67, 71-72, and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alden et al (US 6,101543) in view of Valizadeh et al (US 5,678,006).

Claim 35:

Alden does not explicitly disclose the network protocol is a simple network management protocol version 1. However, Valizadeh discloses use of simple network management protocol version 1 as a network protocol was well known in the art at the time applicant's invention was made (col 1, lines 41-56 and col 3, lines 12-22).

At the time applicant's invention was made, it would have been obvious to one of ordinary skill in the art to modify Alden's invention to include use simple network management protocol version 1 as the network protocol for encoding. One skilled would have been motivated to do so because use of simple network management protocol version 1 allows network managers to control configuration of attached devices (Valizadeh: col 1, lines 41-45). One skilled should further appreciate that use of simple network management protocol version 1 allows network management systems to monitor network-attached devices for conditions that warrant administrative attention.

Claim 36:

As per claim 36, because Valizadeh discloses use of simple network management protocol version 1 (col 1, lines 41-56 and col 3, lines 12-22), he implicitly discloses forming a set request in the first computer unit upon encoding the cryptographically processed message; and transmitting the set request from the first computer to the second computer unit. One skilled should appreciate that SNMPv1 defines five core protocol data units (PDUs): GET REQUEST, which is used to retrieve a piece of management information; GETNEXT REQUEST, which is used iteratively to retrieve sequences of management information; GET RESPONSE, which causes used

agents to respond with data to GET and SET requests from the manager; SET REQUEST, which is used to initialize and make a change to a value of network elements; and TRAP, which is used to report an alert or other asynchronous event about the managed system. The limitations further recited in claim 36 describe normal operation of a network system which employs use of SNMPv1.

Claims 64-65:

The limitations recited in claims 64-65 are similar to the limitations found in claims 35-36 respectively and are rejected for similar reasons.

Claim 67:

The limitations recited in claim 67 are similar to the limitations found in claim 35 respectively and are rejected for similar reasons.

Claims 71-72:

The limitations recited in claims 71-72 are similar to the limitations found in claims 35-36 respectively and are rejected for similar reasons.

Claim 74:

The limitations recited in claim 74 are similar to the limitations found in claim 35 respectively and are rejected for similar reasons.

Conclusion

Note that while the above citations of the art are meant to help applicant in consideration of the art with respect to the recited limitations, applicant should fully review all of the prior art of record since other sections not cited by the examiner could

Art Unit: 2135

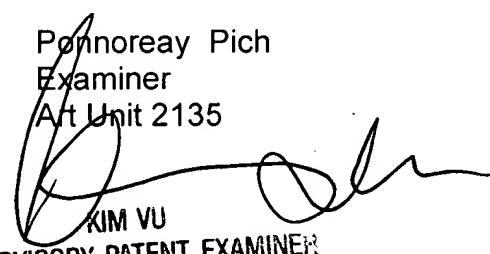
also be pertinent to the recited limitations and other combinations of the prior art of record could also be applicable in rejecting the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

Ponnoreay Pich
Examiner
Art Unit 2135

KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100